



Parcel E-2 Remedial Action  
Update

## **Hot Spot Delineation and Excavation**

Hunters Point Naval Shipyard BCT Meeting

**8/7/2014**

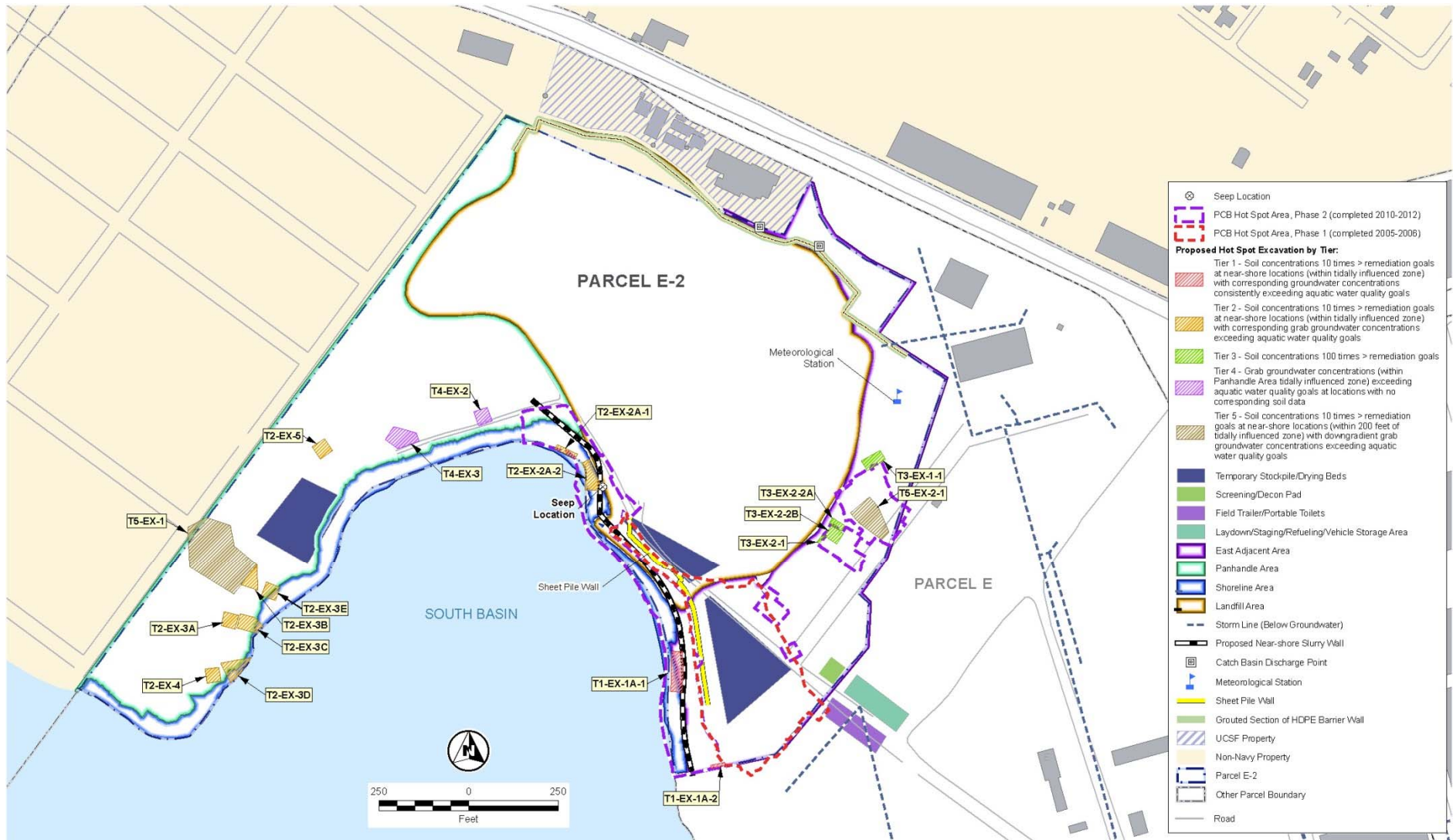
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# Presentation Outline



- **Hot Spot Areas – Site Layout**
- **Characterization Summary**
- **Characterization Results**
- **Hot Spot Goal Exceedances / Revised Excavation Boundaries**
- **Schedule Update**

# Hot Spot Areas – Site Layout



# Pre-Excavation Characterization Summary



- **Pre-excavation characterization sampling was conducted from March 18 to May 5, 2014, and June 25 to July 1, 2014.**
- **294 Pre-characterization borings were advanced:**
  - 213 original borings advanced
  - 58 stepout borings advanced (for horizontal bounding)
  - 23 resample borings advanced deeper (for additional vertical bounding)
- **Additional step-outs planned for horizontal bounding at T5-EX-1:**
  - On northeast and southwest edges to bound lead contamination.
  - Across fenceline on State Parks property to bound TPH contamination.
  - Drilling event proposed for fall 2014 concurrent with mobilization for excavation of other hot spots.
  - T5-EX-1 will be conducted at the end of the field activities to ensure adequate time to evaluate results and determine a path forward.

# Hot Spot Goals



Tier	Analyte	Soil Goal (mg/kg)	Sediment Goal (mg/kg)
2	Lead	1,970	2,180
4, 5	Lead	1,970	NA
5	Copper	4,700	NA
2	Total TPH	3,500	3,500 (No exceedances)
3, 4, 5	Total TPH	3,500	NA
1, 2	Total PCBs	7.4	1.8
4	Total PCBs	7.4	NA

- No exceedances of sediment goals for copper or Total TPH
- Sediment goals do not apply to Tiers 3, 4, or 5
- Sediment goals for Tiers 1 and 2 apply to samples collected at depths above 3 ft bgs within the Shoreline Area (see Slide 3)

# Pre-Excavation Characterization Summary (cont.)



- **Horizontal bounding not 100% achieved at T2-EX-3D and T4-EX-3:**

- T2-EX-3D

- Debris field caused extensive drilling refusal in the area.
- Sample T2EX3D-022 is along the Parcel E-2/F boundary, but unbounded for lead (11,200 mg/kg) to the southwest.
- Confirmation sidewall sampling will ensure all contamination is excavated.

- T4-EX-3

- Samples T4EX3-055 and 062 are along the western edge of T4-EX-3 and are unbounded for lead (2,850 mg/kg and 12,400 mg/kg, respectively) and Total PCBs (20 mg/kg and 96.84 mg/kg, respectively).
- Excavation boundary unbounded for lead and PCBs along western edge.
- Confirmation sidewall sampling will ensure all contamination is excavated.

# Pre-Excavation Characterization Summary (cont.)



- **Vertical bounding not 100% achieved at T2-EX-2A-1, T2-EX-3C, and T2-EX-3D:**

- T2-EX-2A-1

- 8.6 mg/kg total PCBs in sample T2EX2A1-029 at 9.5 feet bgs.
- Exceeds soil goal of 7.4 mg/kg.
- Excavation will extend to 10 feet.

- T2-EX-3C

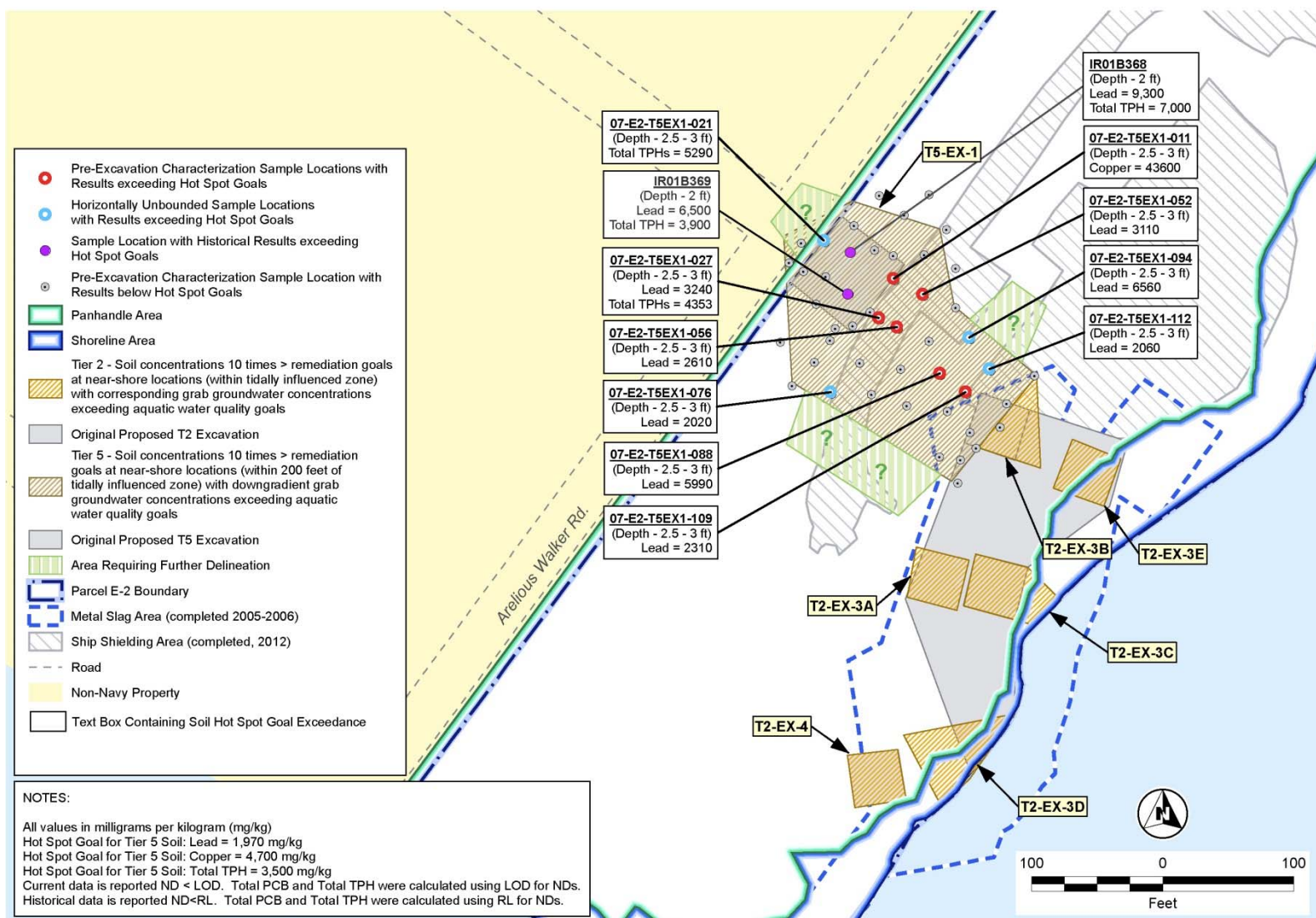
- 2,070 mg/kg Lead in sample T2EX3C-023 at 11 feet bgs.
- Exceeds soil goal of 1,970 mg/kg.
- Excavation will extend to 11 feet.

- T2-EX-3D

- 2,110 mg/kg Lead in sample T2EX3D-013 at 6 feet bgs.
- Exceeds soil goal of 1,970 mg/kg.
- Excavation will extend to 7 feet, and up to 10 feet depending on depth of contamination.

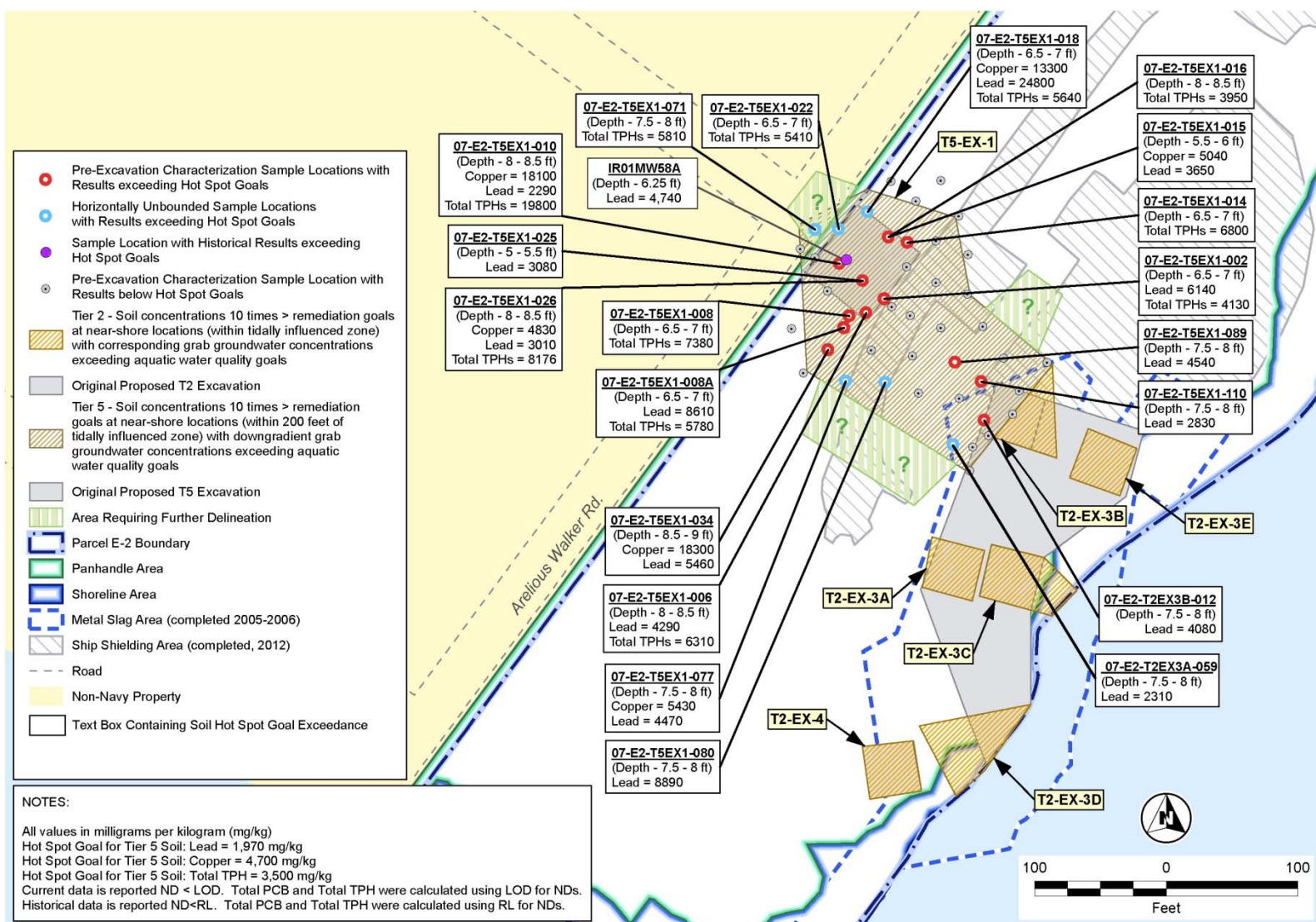


# Hot Spot Goal Exceedances (T5-EX-1): Ground Surface to 5 Feet

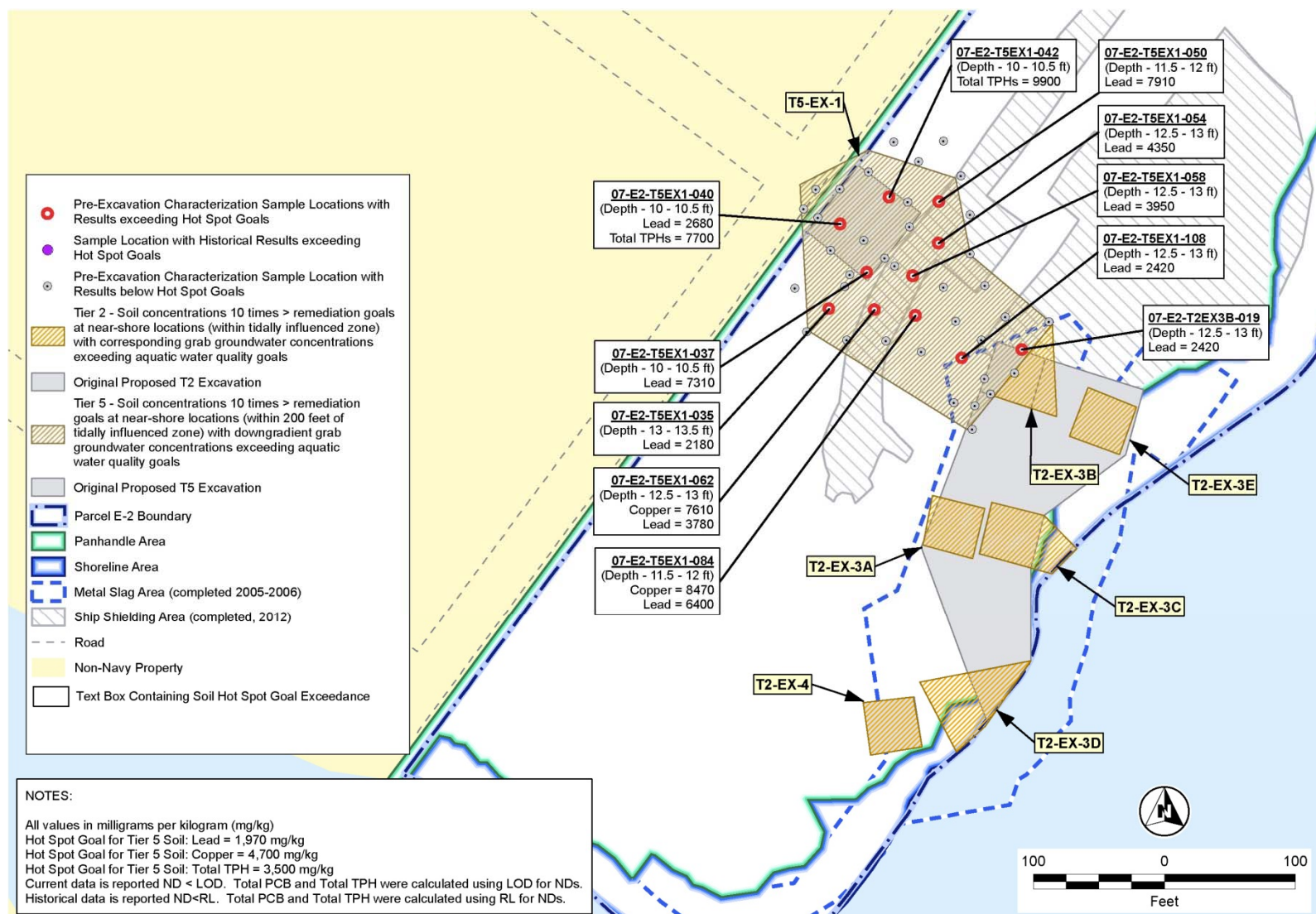




# Hot Spot Goal Exceedances (T5-EX-1): 5 to 10 Feet

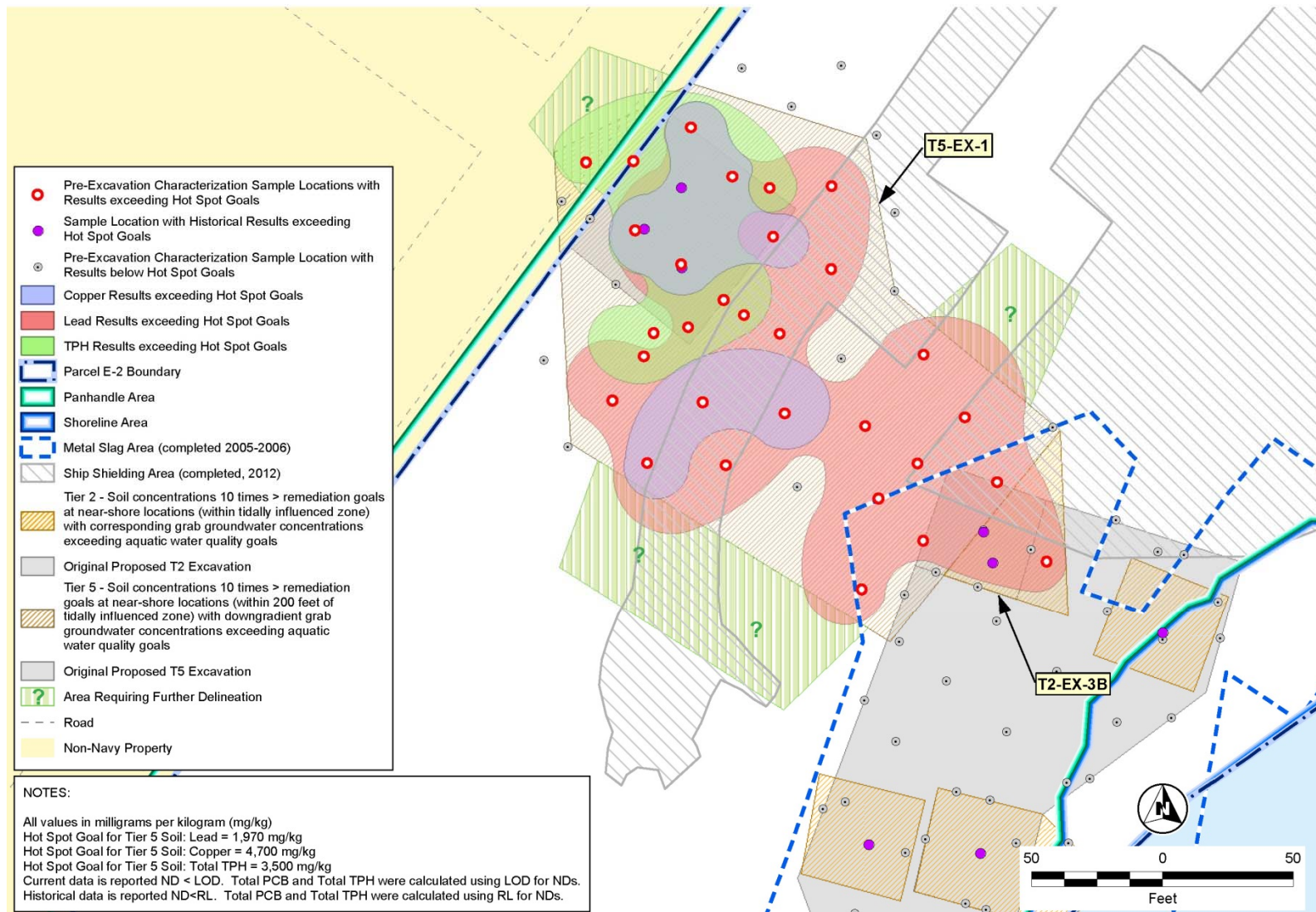


# Hot Spot Goal Exceedances (T5-EX-1): 10 to 15 Feet

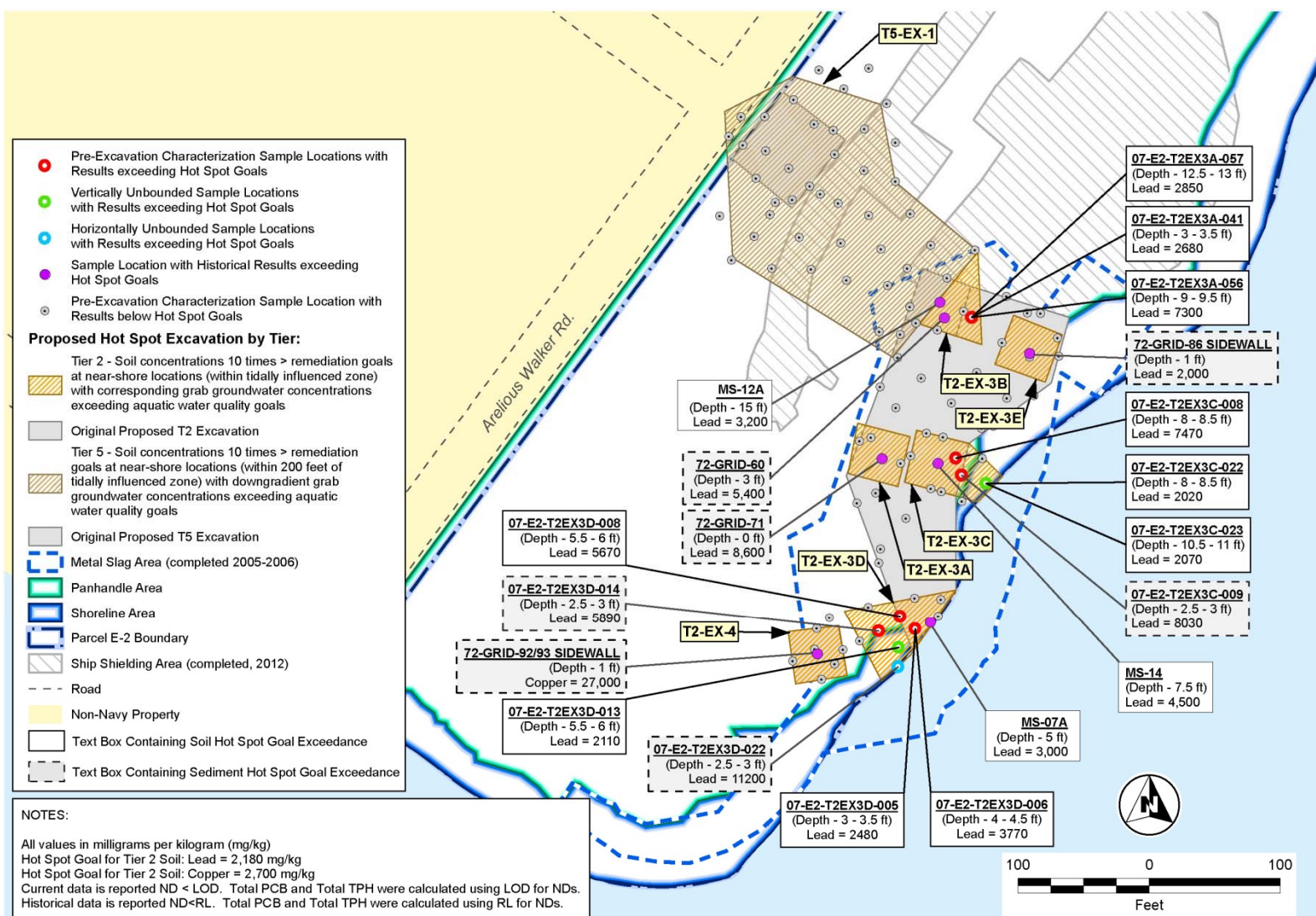




# Hot Spot Goal Exceedance Plumes - T5-EX-1 Area

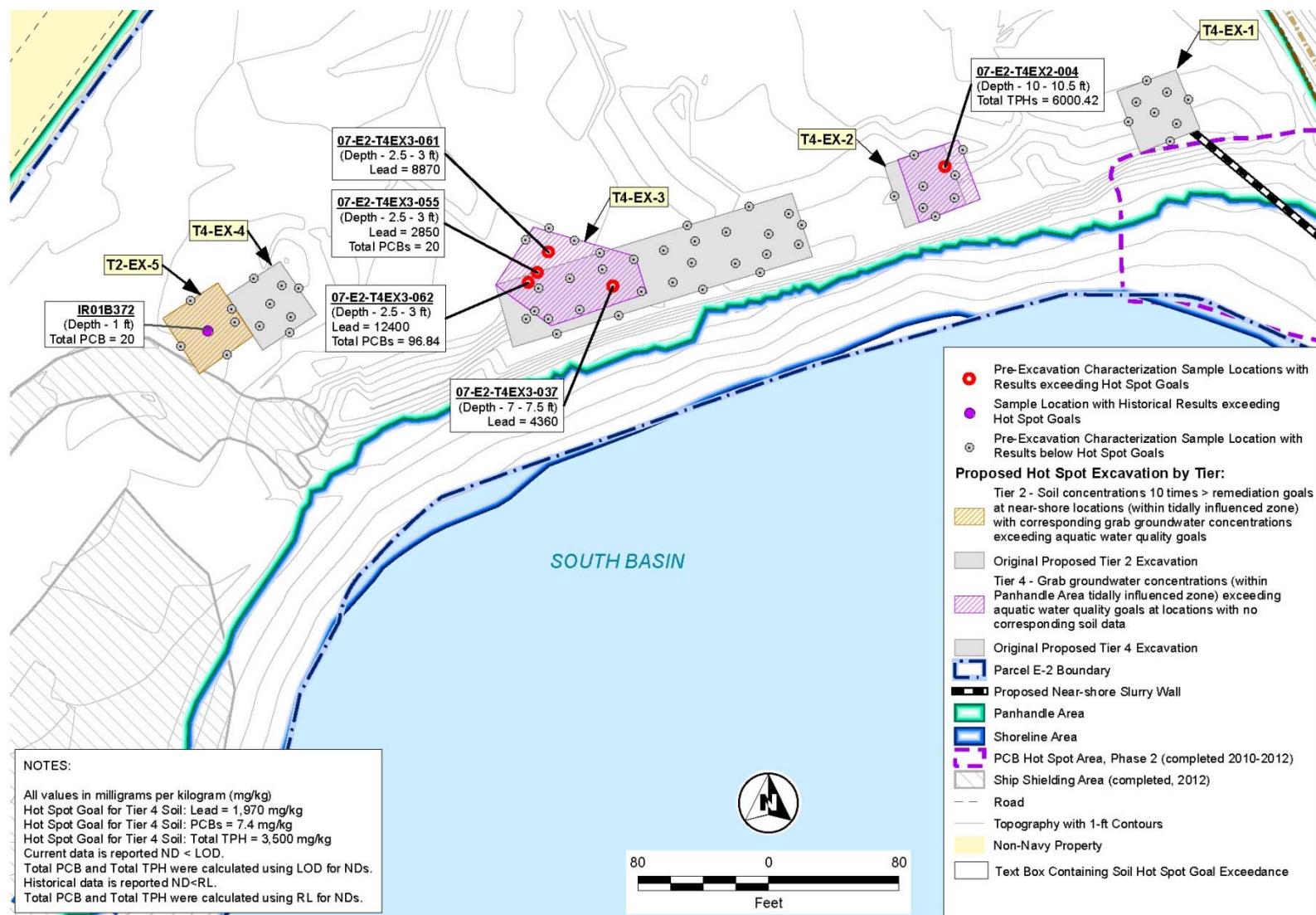


# Hot Spot Goal Exceedances (T2-EX-3A, -3B, -3C, -3D; T2-EX-4)

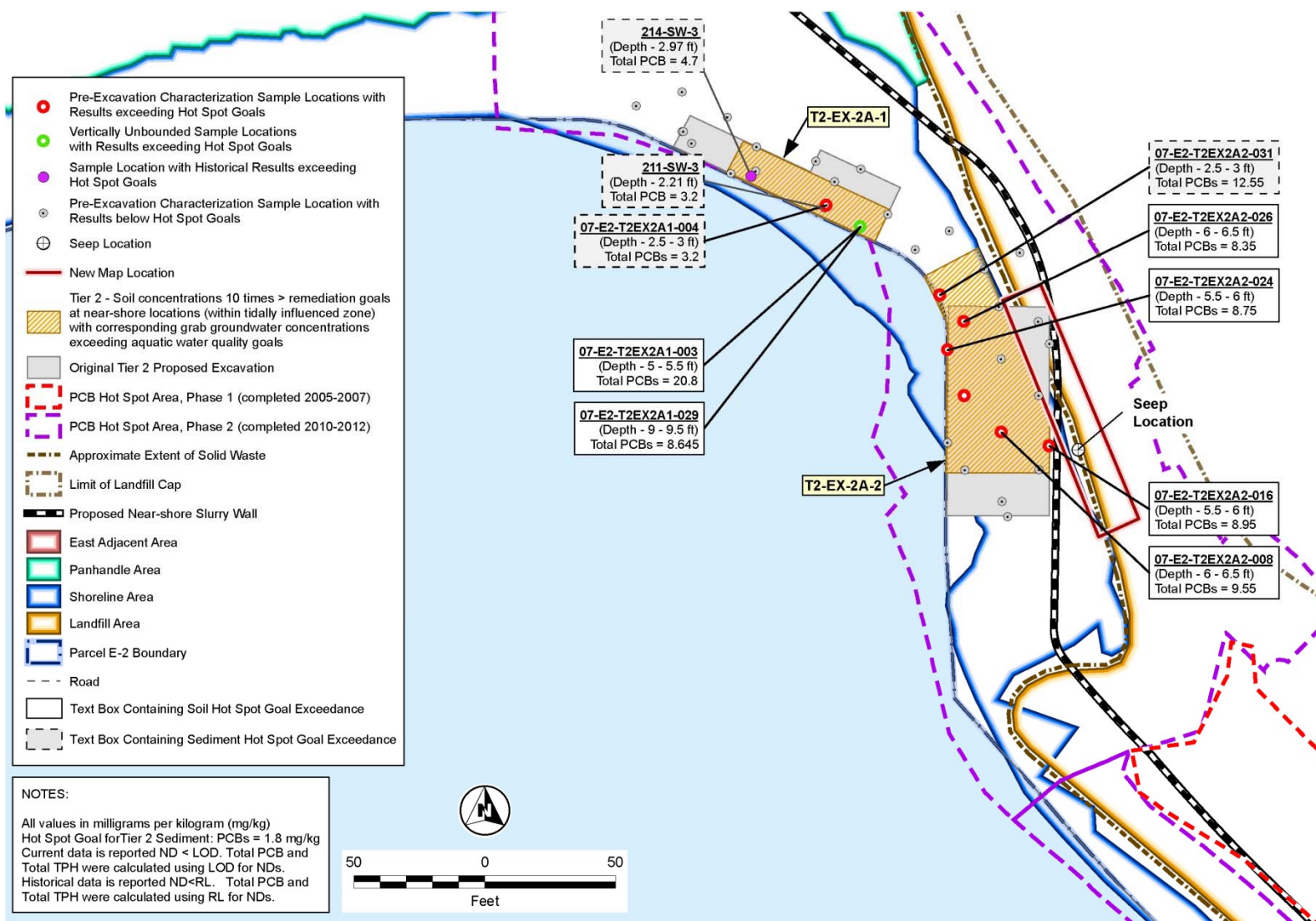




# Hot Spot Goal Exceedances (T2-EX-5; T4-EX-1, -2, -3, -4)

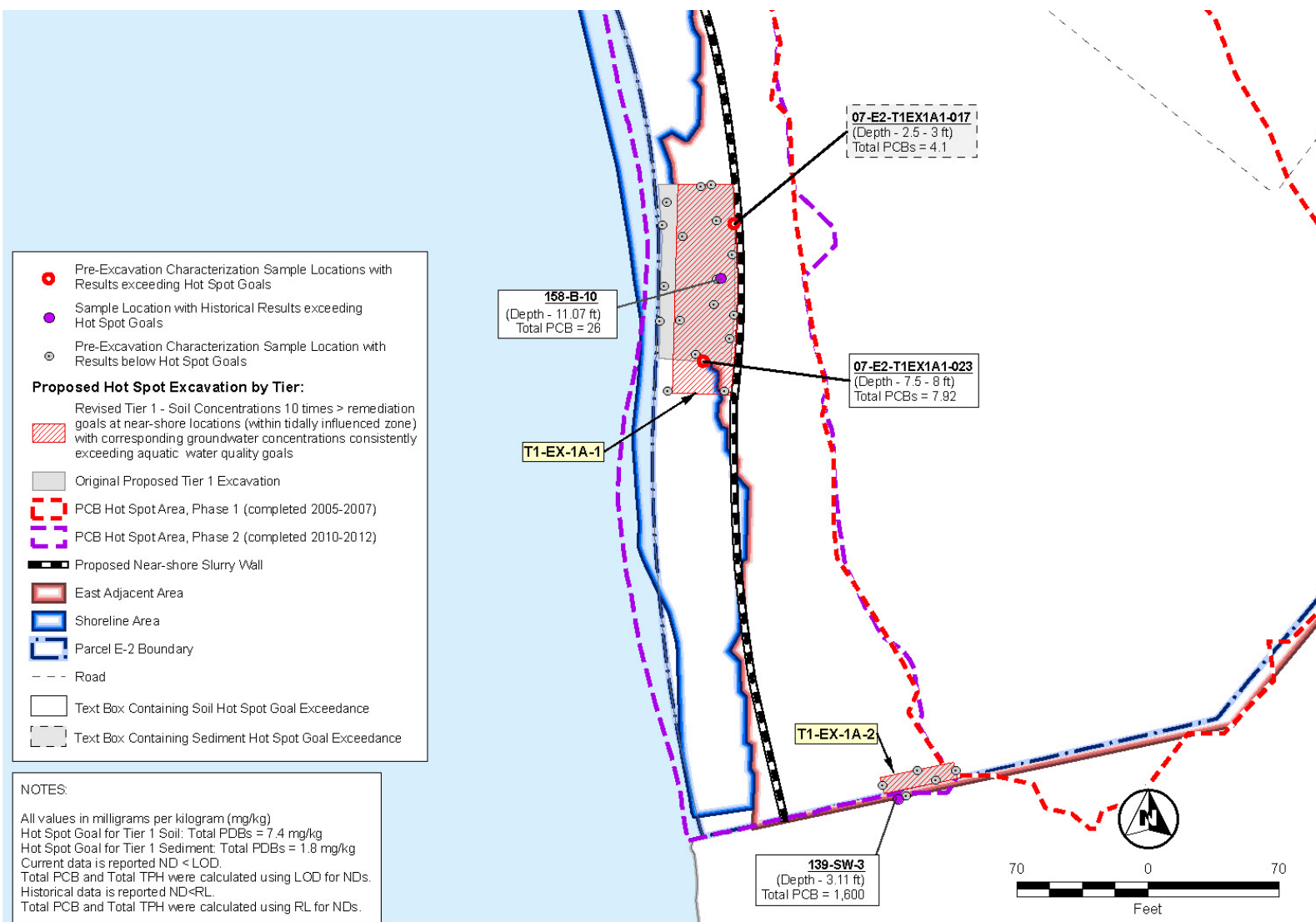


# Hot Spot Goal Exceedances (T2-EX-2A-1, T2-EX-2A-2)

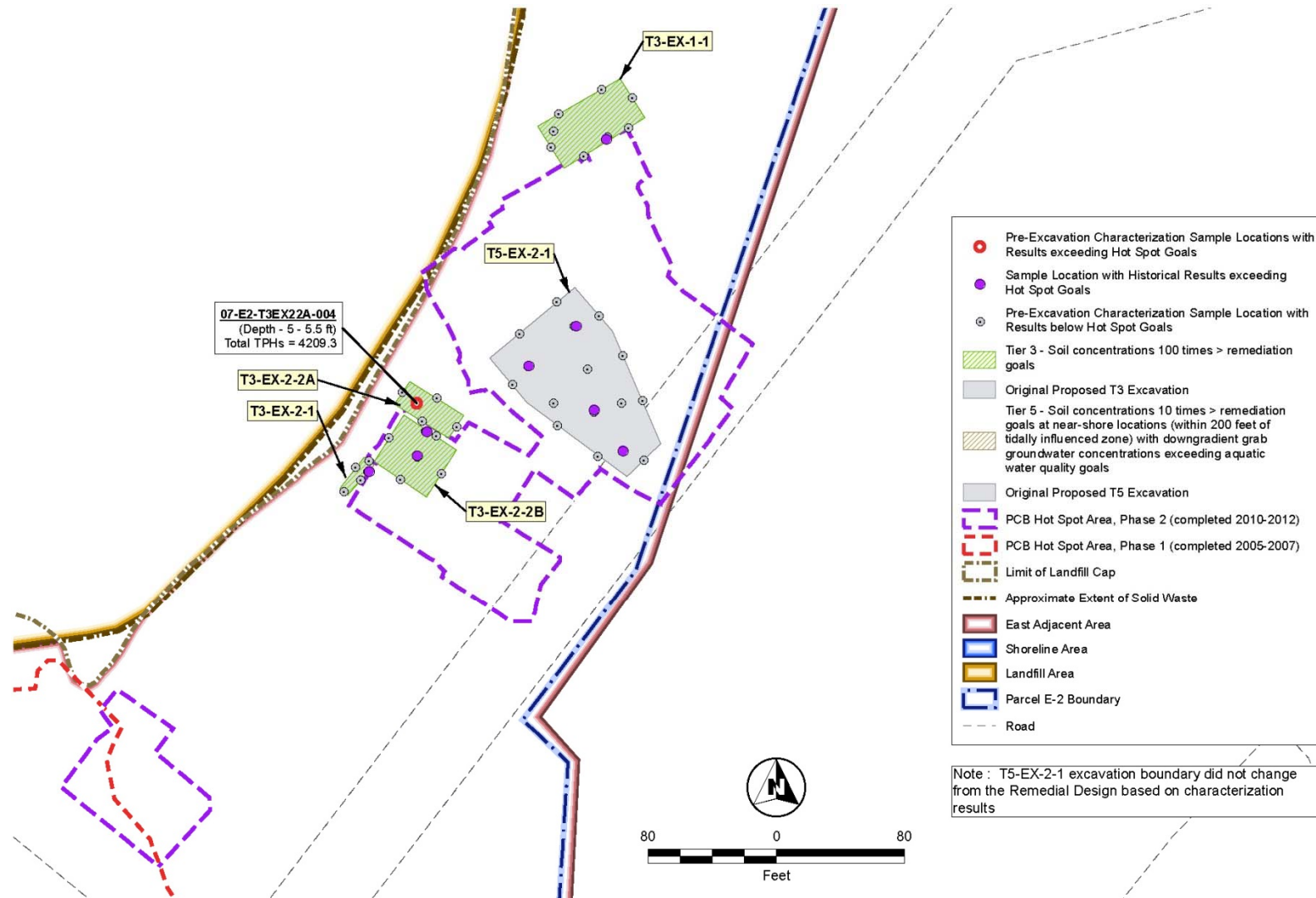




# Hot Spot Goal Exceedances (T1-EX-1A-1, T1-EX-1A-2)



# Hot Spot Goal Exceedances (T3-EX-1-1; T3-EX-2-1, -2A, -2B; T5-EX-2-1)



# Schedule Update



Submit Draft E-2 Hot Spot RAWP	Dec 20, 2013
BCT Comments Due	Feb 6, 2014
Utility Locating	Mar 19, 2014
Submit Final E-2 Hot Spot RAWP	Mar 28, 2014
Drilling and Sampling	Mar 31 – May 7, 2014
Submit Draft ESS to NOSSA	April 8, 2014
Re-mobilization Drilling and Sampling	June 30 – July 3, 2014

Submit Draft Characterization Tech Memo to BCT	Aug 22, 2014
Rehabilitation of Radiological Screening Pads	Aug 2014
Turbidity Curtain Installation	Sep 2014
Hot Spot Excavation	Oct 8 – May 16, 2015
Draft Hot Spot RACR	July 16, 2015
Final Hot Spot RACR	Nov 4, 2015

# Hot Spot Tiers



- **Tier 1 Hot Spots** consist of near-shore locations where soil concentrations are greater than 10 times the remediation goals and corresponding groundwater concentrations in monitoring wells consistently exceed aquatic evaluation criteria. Tier 1 hot spots were identified at the shoreline portion of the PCB Hot Spot Area.
- **Tier 2 Hot Spots** consist of near-shore locations where soil concentrations are greater than 10 times the remediation goals and corresponding groundwater concentrations in temporary wells exceed aquatic evaluation criteria. Tier 2 hot spots were identified at the Metal Slag Area, north of the Ship Shielding Area, and northwest of the PCB Hot Spot Area.
- **Tier 3 Hot Spots** consist of inland locations where soil concentrations are greater than 100 times the remediation goals. Tier 3 hot spots were identified along the northern sidewall of the PCB Hot Spot Area excavation and in the central portion of the East Adjacent Area.

## Hot Spot Tiers (cont.)



- **Tier 4 Hot Spots** consist of near-shore locations where groundwater concentrations in temporary wells exceed aquatic evaluation criteria and no corresponding soil data are available. Tier 4 hot spots were identified in the northern portion of the Panhandle Area.
- **Tier 5 Hot Spots** consist of inland locations where soil concentrations are greater than 10 times the remediation goals and corresponding groundwater concentrations in downgradient temporary wells exceed aquatic evaluation criteria. Tier 5 hot spots were identified in the southern portion of the Panhandle Area and in the East Adjacent Area.